

**MONTEREY BAY UNIFIED AIR POLLUTION CONTROL DISTRICT
TITLE V OPERATING PERMIT
EVALUATION REPORT**

24580 Silver Cloud Court
Monterey, CA 93940
Telephone: (408) 647-9411

Dated: September 18, 1996, Revised October 31, 1996
Revised Pursuant To Comments Received During Comment Period

APPLICATION RECEIVED FROM:

Pacific Energy - Crazy Horse Canyon Landfill
P.O. Box 30900
Los Angeles, CA 90030

PLANT SITE LOCATION:

350 Crazy Horse Canyon Road
Salinas, CA 93907

APPLICATION PROCESSED BY:

Mike Sewell, Air Quality Engineer

Nature of Business: Landfill gas to energy facility

SIC Code: 4911 - Electric Power Generation

RESPONSIBLE OFFICIAL:

Name: Paul Nakamoto
Title: Vice President
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FACILITY CONTACT PERSON:

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FACILITY DESCRIPTION

Pacific Energy's Crazy Horse Canyon facility is an alternative energy facility. This facility recovers and utilizes landfill gas from the Crazy Horse Landfill in an internal combustion engine which drives a generator to create electricity. The electricity generated is then sold to the local utility company. The facility is presently permitted under the District's local permitting program under Permit to Operate 8404.

Pacific Energy's Crazy House Canyon facility is considered a federal Major Source and subject to the Title V permitting program due to the potential to emit (PTE) methylene chloride. Methylene Chloride is listed as a Hazardous Air Pollutant (HAP) under Title III of the Clean Air Act. The PTE methylene chloride from the facility exceeds the 10 ton per year (TPY) major source threshold for a single HAP. This major source determination was based upon information supplied to the District in the facility's AB 2588 (Air Toxics Hot Spots Information and Assessment Act) submittal which reported 8.5 TPY of methylene chloride emissions from the facility.

EQUIPMENT DESCRIPTION

INTERNAL COMBUSTION ENGINE GENERATOR SET UTILIZING LANDFILL GAS CONSISTING OF:

1. "Clean Burn" Engine, M.E.P. Industries Model MEP-8T, Opposed Piston, Turbocharged-Intercooled, Eight Cylinders, Rated 2,200 Horsepower-Hour At 900 RPM.
2. Generator, Rated At 1,500 Kw.
3. Landfill Condensate Evaporation System.

APPLICABLE FEDERAL REQUIREMENTS

Rule 207 - Review of New or Modified Sources

Even though this facility did not trigger the NSR process during the issuance of their local permit, the District has set the NSR trigger levels as emission caps for the facility. Therefore, this emission cap is considered federally enforceable and will be included on the Title V Permit.

Rule 218 - Title V: Federal Operating Permits

This is the implementing regulation by which the District issues the federal Operating Permits. All requirements imposed by this rule will be included in the Title V permit.

Rule 308 - Title V: Federal Operating Permit Fees

This is the District's fee rule for Title V. Appropriate conditions will be included on the Title V permit to ensure compliance with the fee provisions contained in this rule.

Rule 400 - Visible Emissions

This rule is applicable to the emissions from the facility. Appropriate conditions will be included on the permit to ensure compliance with this rule.

Rule 403 - Particulate Matter

The 0.15 grains per dry cubic foot emission standard is applicable to this facility and will be included on the permit. Based upon the exhaust stack diameter of 0.66 meters and an exit velocity of 28.75 meter/second, this would equate to an emission limit of 26.5 pounds per hour. The particulate emission estimates from this engine are less than 2 pounds per hour based upon the AP-42 particulate factor for gasoline engines (Table 3.3-1 dated 10/92) $[(0.327 \text{ gm/hp*hr})(1 \text{ lb/454 gm})(2200 \text{ hp}) = 1.59 \text{ lb PM}_{10}/\text{hr}]$. Therefore, no testing will be required as compliance is assured from the above calculation.

Rule 404 - Sulfur Compounds and Nitrogen Oxides

This rule is applicable to the emissions from the facility. Compliance with the 140 lb/hr NOx limit is assumed due to the 6.25 lb/hr limit from the New Source Review process (Rule 207). In addition, source testing reports for the facility show a NOx concentration of 36 ppm which equates to 2.2 pounds/hr. At the 6.25 lb/hr limit from the NSR permit, the maximum concentration would equate to 102 ppm, well below the 350 ppm limit contained in SIP approved Rule 404.

Therefore, both the 140 lb/hr and the 350 ppm NOx limits will be subsumed under the NSR limits contained on the Title V permit. An appropriate condition will be included on the permit for the 0.2 percent by volume sulfur dioxide limit.

Rule 412 - Sulfur Content of Fuels

This rule is applicable to the fuel combusted at the facility. Appropriate conditions will be included on the permit to ensure compliance with the provisions of this rule.

40 CFR Part 60, Subpart WWW - New Source Performance Standard for Municipal Solid Waste Landfills

This facility is located on, and combusts landfill gas from a facility subject to the requirements of this NSPS. This facility will be subject to the emission limitation contained in the NSPS at the date that it becomes effective. Appropriate conditions will be included on the permit to ensure compliance with the requirements of this NSPS that pertain to this facility.

THE FOLLOWING CONDITIONS WILL BE INCLUDED ON THE TITLE V PERMIT:

FEDERALLY ENFORCEABLE EMISSION LIMITS AND STANDARDS

1. The mass emission rates from the facility shall not exceed the following mass emission limits [District Rule 207, District Rule 404 NOx limits of 140 lbs/hr and 350 ppm]:

<u>Pollutant</u>	<u>Lbs/Hour</u>	<u>Lbs/Day</u>
Oxides of Nitrogen	6.25	150.0
Carbon Monoxide	22.90	550.0
Non-methane Hydrocarbons	6.25	150.0

2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three (3) minutes in any one (1) hour which is as dark or darker than Ringelmann 1 or equivalent 20% opacity. [District Rule 400]
3. Particulate matter shall not exceed 0.15 grains per standard dry cubic foot in the exhaust stream. [District Rule 403]
4. Sulfur compounds calculated as sulfur dioxide (SO₂) shall not exceed 0.2 percent by volume in the exhaust stream. [District Rule 404]
5. The landfill gas combusted shall contain no more than 50 grains of sulfur compounds (calculated as hydrogen sulfide) per 100 cubic feet of gas. [District Rule 412]

FUTURE FEDERALLY ENFORCEABLE EMISSION LIMITS AND STANDARDS

6. As required in Section 60.756(d) of the New Source Performance Standard (NSPS) for Municipal Solid Waste (MSW) Landfills, Pacific Energy shall provide information describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures to the City of Salinas for incorporation into the City of Salinas's landfill gas collection and control system design submittal. [40 CFR Part 60, Subpart WWW]
7. No later than 18 months after submittal of the City of Salinas' collection and control system design plan as required in Section 60.752(b)(2)(i) of the NSPS for MSW Landfills, Pacific Energy shall either reduce non-methane organic compounds (NMOC) by 98 weight-percent or reduce the NMOC outlet concentration to less than 20 ppmv, dry basis as hexane at 3% oxygen as required in Section 60.752(b)(2)(iii) of the NSPS for MSW Landfills. [40 CFR Part 60, Subpart WWW]
8. Pacific Energy shall operate the control device at all times that the collected gas is routed to the system as required in Section 60.753(f) of the NSPS for MSW Landfills. [40 CFR Part 60, Subpart WWW]
9. As allowed for in Section 60.755(e) of the NSPS for MSW Landfills, conditions 7 and 8 do not apply to Pacific Energy's control device during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 1 hour. [40 CFR Part 60, Subpart WWW]

TESTING REQUIREMENTS AND PROCEDURES

10. Semiannual performance testing of the engine shall be conducted in June and December of

each year. Pacific Energy shall conduct performance tests in accordance with CARB Method 100 to verify compliance with condition numbers 1 and 4. Pacific Energy shall furnish the District written results of such performance tests within thirty (30) days of the test completion. Written notice of the performance test shall be provided to the District a minimum of ten (10) days prior to the test so that a District observer may be present.

11. Semiannual testing of the landfill gas to determine the sulfur content shall be completed during the months of June and December. Pacific Energy shall conduct testing in accordance with ASTM D 1072-80, ASTM D 3031-81, ASTM D 3246-81 or SCAQMD Method 307-91 to verify compliance with condition number 5. Pacific Energy shall furnish the District written results of the test within thirty (30) days of completion.
12. No testing is specified for the generic (Rule 400) opacity requirement from condition number 2. The engine is assumed to be in compliance with the opacity requirement due to its being fired on gaseous fuel. If testing is conducted for condition number 2, Pacific Energy should conduct testing in accordance with the methodology contained in EPA Method 9 and the averaging/aggregating period contained in District Rule 400.
13. No testing is specified for the generic (Rule 403) particulate matter emission standard from condition number 3. The engine is assumed to be in compliance with the particulate matter emission standard due to its being fired on gaseous fuel. If testing is conducted for condition number 3, Pacific Energy should conduct testing in accordance with the methodology contained in EPA Method 5.
14. As required in 40 CFR Part 60.8 (NSPS General Provisions), Pacific Energy shall complete an initial performance test within 180 days after the control system operational deadline established by condition number 7. EPA test method 18 or 25, as specified in Section 60.754(d) of the NSPS for MSW Landfills (40 CFR Part 60, Subpart WWW), shall be used for this initial performance test to verify compliance with the emission limits contained in condition number 7.

RECORD KEEPING REQUIREMENTS

15. As required in Section 60.757(f) of the NSPS for MSW Landfills, Pacific Energy shall maintain the following specific monitoring records:
 - A) the value and length of time for exceedances of applicable parameters monitored under Section 60.756(d) and specified in the design plan submittal; and
 - B) a description and the duration of all times when the control device was not operating for any period exceeding 1 hour and the length of time the control device was not operating.
16. As applicable Pacific Energy shall maintain the following general records of required monitoring information:

- A) the date and time of sampling or measurements;
 - B) the date(s) analyses were performed;
 - C) the company or entity that performed the analyses;
 - D) the analytical techniques or methods used;
 - E) the results of such analyses;
 - F) the operating conditions existing at the time of sampling or measurement; and
 - G) the records of quality assurance for continuous monitoring systems (including, but not limited to quality control activities, audits, and calibration drift checks) and source testing methods.
17. Pacific Energy shall maintain records on the occurrence and duration of any start-up, shutdown, or malfunction in the operation of the equipment under this permit.
18. Pacific Energy shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring, sample collection, measurement, report, and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

REPORTING REQUIREMENTS

19. Pacific Energy shall submit semiannual monitoring reports to the District, in a District approved format, no later than August 15 for the period of January 1 through June 30 and no later than February 15 for the period of July 1 through December 31.

These monitoring reports shall include at a minimum:

- A) the time intervals, date and magnitude of excess emissions, nature and cause of the excess (if known), corrective actions and preventative measures adopted; and
 - B) the averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard for the pollutant in question; and
 - C) all information pertaining to any monitoring as required by the permit; and
 - D) a negative declaration specifying when no excess emissions occurred.
20. Pacific Energy shall submit an annual compliance certification report to the District and U.S. EPA, in a District approved format, no later than February 15 for the period of January 1 through December 31 of the preceding year.

This report shall include a written statement from the responsible official which certifies the truth, accuracy, and completeness of the report and shall include at a minimum:

- A) identification of each term or condition of the permit that is the basis of the

certification; and

- B) the compliance status; and
- C) whether compliance was continuous or intermittent; and
- D) the method(s) used for determining the compliance status of the source, currently and over the reporting period.

GENERAL CONDITIONS

- 21. Pacific Energy shall comply with all conditions of this federal operating permit. Any noncompliance with a permit condition constitutes a violation of the Federal Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
- 22. In an enforcement action, the fact that Pacific Energy would have to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit is not a defense.
- 23. This permit may be modified, revoked, reopened and reissued, or terminated for cause as determined by the District. The filing of a request by Pacific Energy for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- 24. This permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
- 25. Pacific Energy shall furnish to the District, within a reasonable time, any information that the District may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, Pacific Energy shall also furnish to the District copies of records required to be retained by this permit.
- 26. For applicable requirements that will become effective during the permit term, Pacific Energy shall meet such requirements on a timely basis unless a more detailed schedule is expressly required by the applicable requirement.
- 27. Any document submitted to the District pursuant to this permit shall contain certification by the responsible official of truth, accuracy and completeness. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Pacific Energy shall promptly, upon discovery, report to the District a material error or omission in these records, reports, plans, or other

documents.

28. Pacific Energy shall report any violation of any requirement contained in this permit to the District within 96 hours after such occurrence. The violation report shall include the time intervals, date and magnitude of excess emissions; nature and cause of the excess (if known), corrective actions and preventive measures adopted.
29. Upon any administrative or judicial challenge, all the emission limits, specific and general conditions, monitoring, record keeping, and reporting requirements of this permit, except those being challenged, remain valid and must be complied with.
30. For this federal operating permit to remain valid through the permit term of five years from the date of issuance, Pacific Energy shall pay an annual emission fee based upon the requirements of District Rule 308.
31. Pacific Energy shall have available at the facility at all times a copy of this federal operating permit.
32. For protection from enforcement action based upon an emergency, as defined in District Rule 218, the responsible official for Pacific Energy shall submit to the District relevant evidence which demonstrates:
 - A) an emergency occurred; and
 - B) that Pacific Energy can identify the cause(s) of the emergency; and
 - C) that the facility was being properly operated at the time of the emergency; and
 - D) that all steps were taken to minimize the emissions resulting from the emergency; and
 - E) within two working days of the emergency event, Pacific Energy provided the District with a description of the emergency and any mitigating or corrective actions taken.
33. Upon presentation of credentials, Pacific Energy shall allow the District, the ARB, the EPA, or an authorized representative, to perform the following:
 - A) enter upon the premises where the federal operating permit source is located or in which any records are required to be kept under the terms and conditions of this federal operating permit;
 - B) to have access to and copy any records required to be kept under the terms and conditions of this federal operating permit;
 - C) to inspect any equipment, operation, or process described or required in this

federal operating permit; and,

- D) to sample emissions from the source.
